

Sea Scallop Stock Enhancement in Maine

A Fishing Community Based Project



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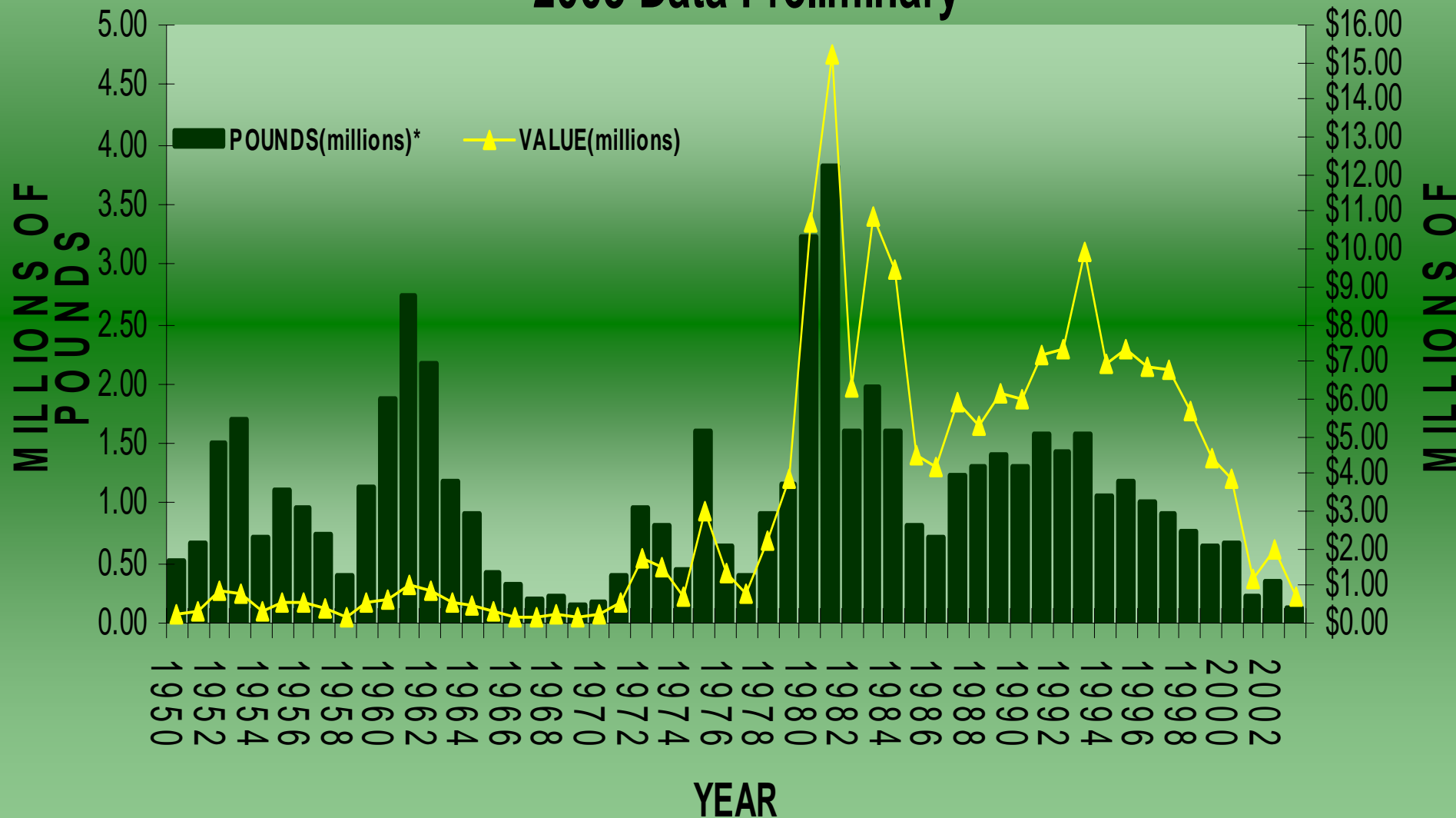
- Year 6 of a collaborative effort involving fishermen, community organizations, UMaine Sea Grant, and Maine DMR
 - Year 1 – Can spat be collected in Maine state waters?
 - Year 2 – Scaling up the effort and selective monitoring of seeded areas
 - Year 3 – Further expansion, monitoring, socio-economic issues
 - Years 4 – 5 Decreasing involvement, questions about success
 - Year 6 – DMR Scallop Advisory Council sponsors an Enhancement Workshop to establish direction
- Interest in scallop culture
- Mix of systematic and trial and error approach
- Low cost, volunteer-based
- Integrating with DMR's scallop monitoring programs

Maine's Inshore Scallop Fishery

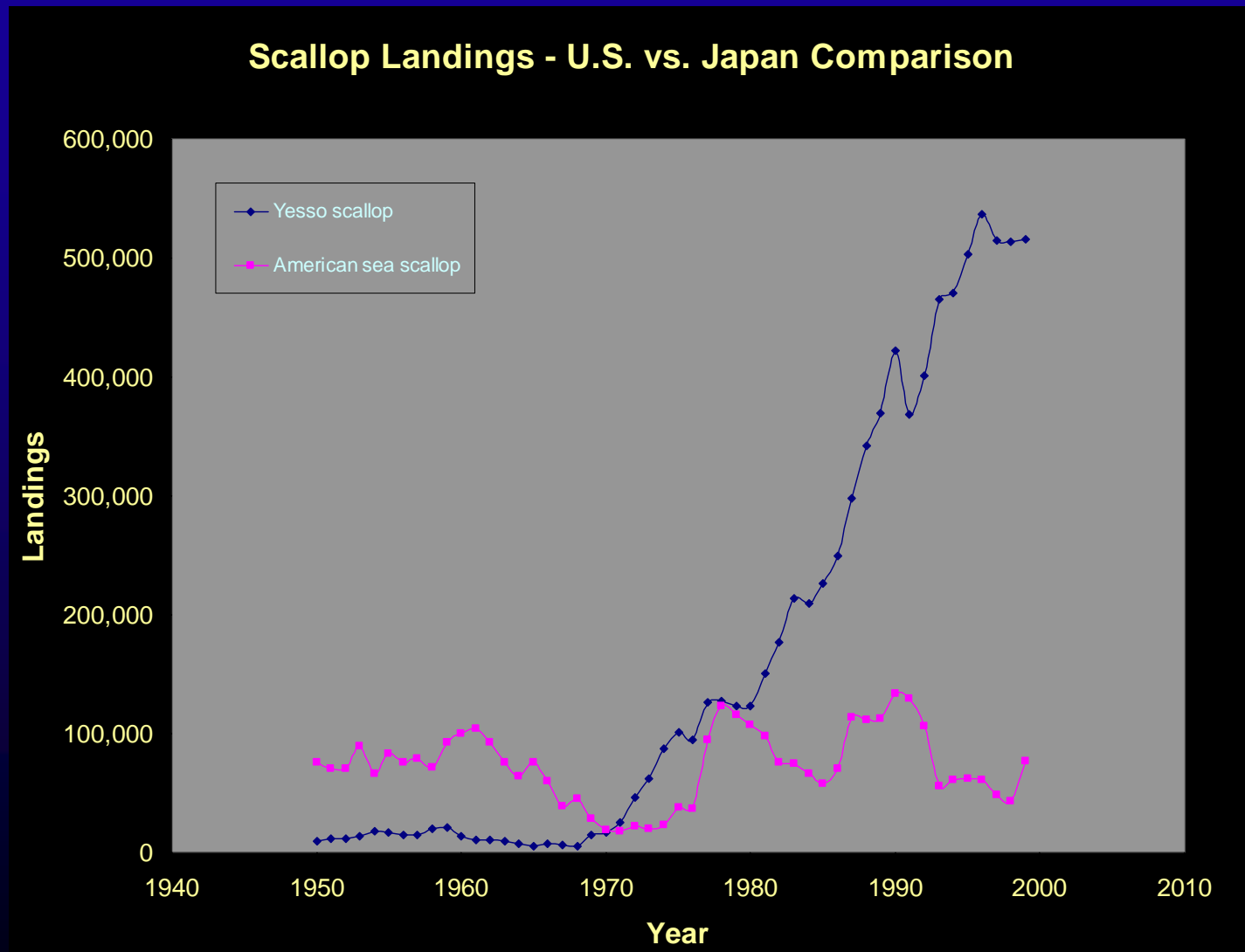
- Declining landings/ increased effort
- Maine contributes only 2.5% of U.S. scallop supply
- Higher day boat prices (but recent decline in price)
- No license limitation / large amount of latent effort
 - 889 draggers, 390 divers
- Season runs Dec 1- April 15
- Most fishermen have permits for multiple species
- Extensive areas of historically productive bottom

STATE OF MAINE SEA SCALLOP LANDINGS

2003 Data Preliminary



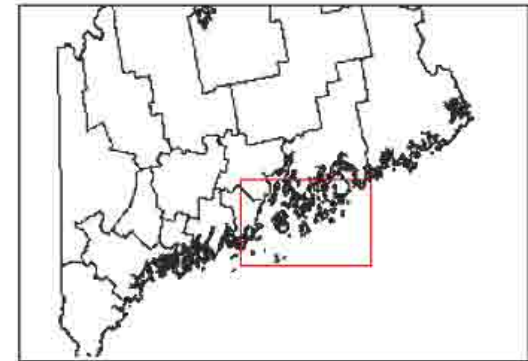
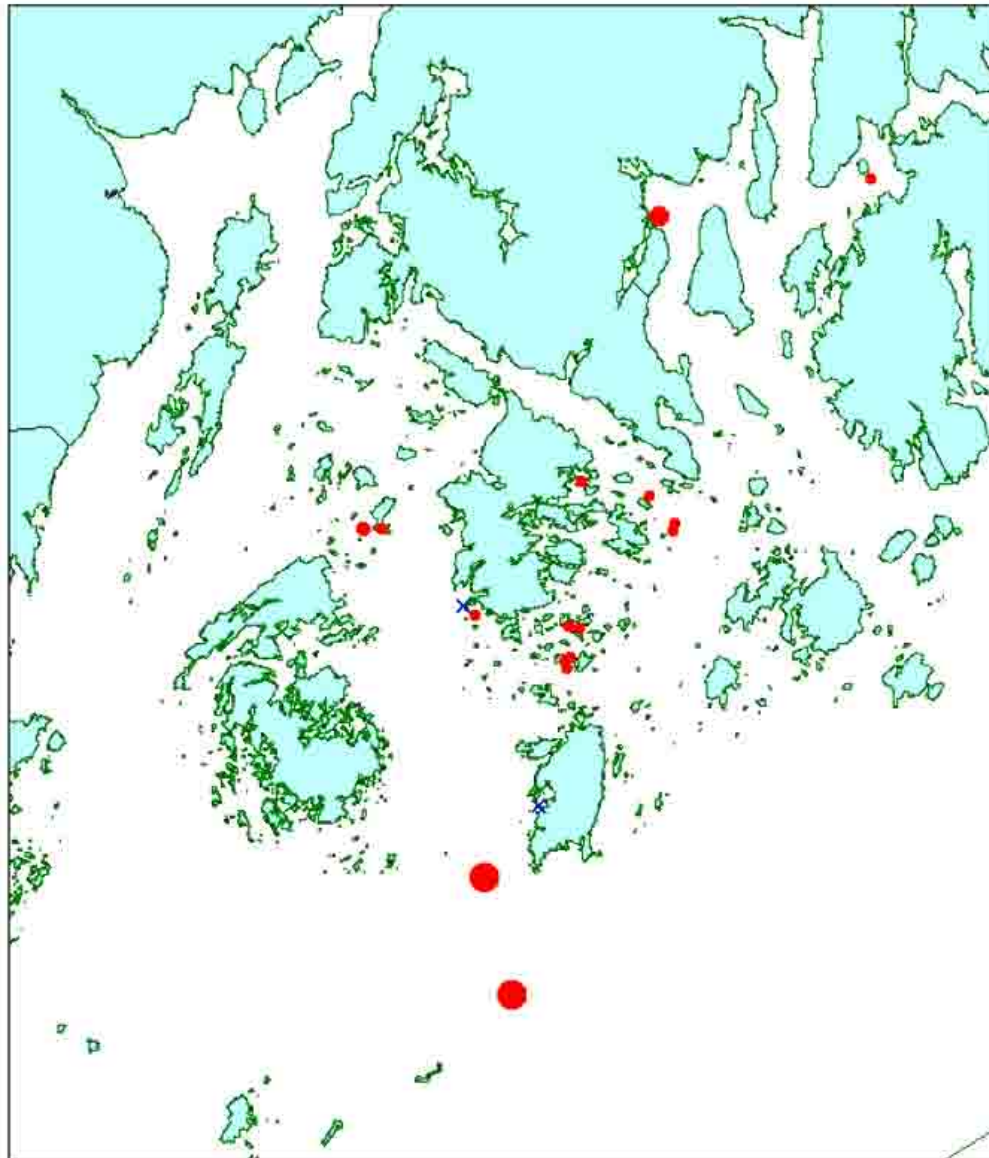
The reason Maine fishermen are interested in the project...



- Maine delegation sent to Japan
- Encouragement of enhancement activities and research
 - Coastal Research Priorities
 - Development Potential of Maine Scallop Industry Report
- Assessment of issues by local organizations
 - Cobscook Fishermans Association, Cobscook Bay Resource Center, Stonington Fisheries Alliance, Northwest Atlantic Marine Alliance, Saco Bay Fisheries Alliance, University of Maine, UMaine Sea Grant, Maine Dept. Marine Resources, Beals Island Regional Shellfish Hatchery

WILD SCALLOP STOCK ENHANCEMENT PROJECT

Year 1, June 1999 - June 2000



Scallop Spat

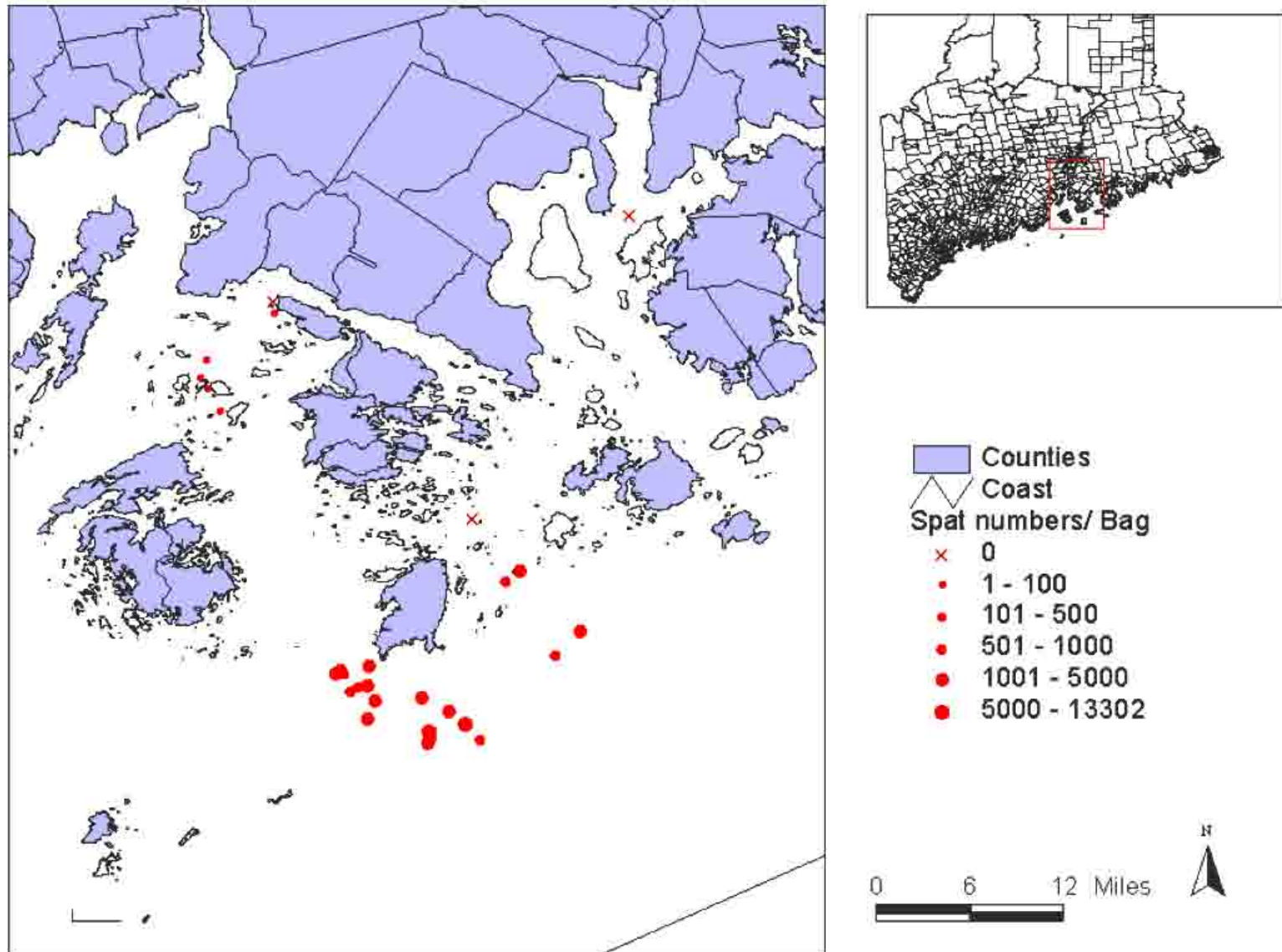
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Coastline

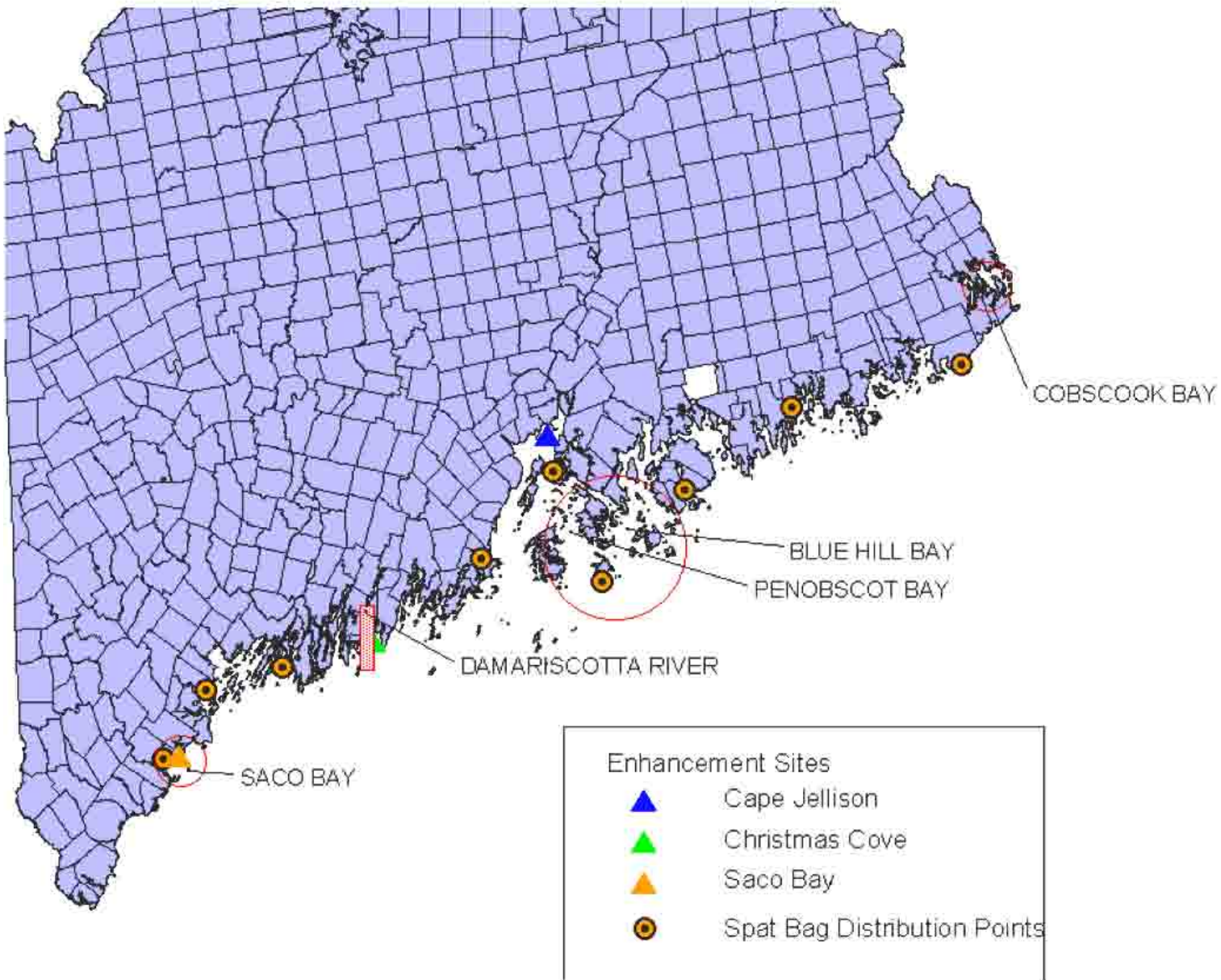


WILD SCALLOP STOCK ENHANCEMENT PROJECT

Year 2, June 2000 - June 2001



SITE OVERVIEW



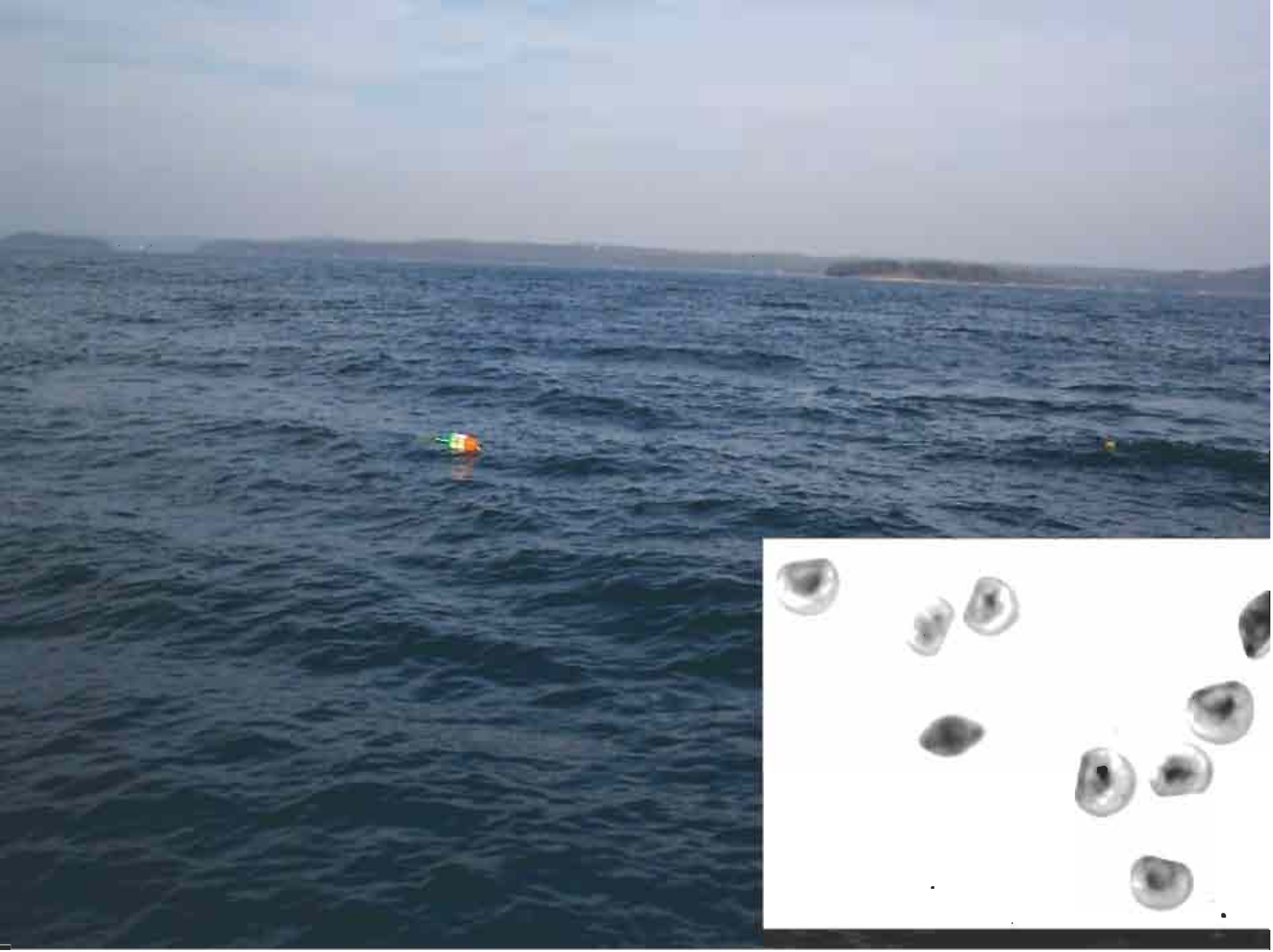


Spat bag preparation



Setting the bags

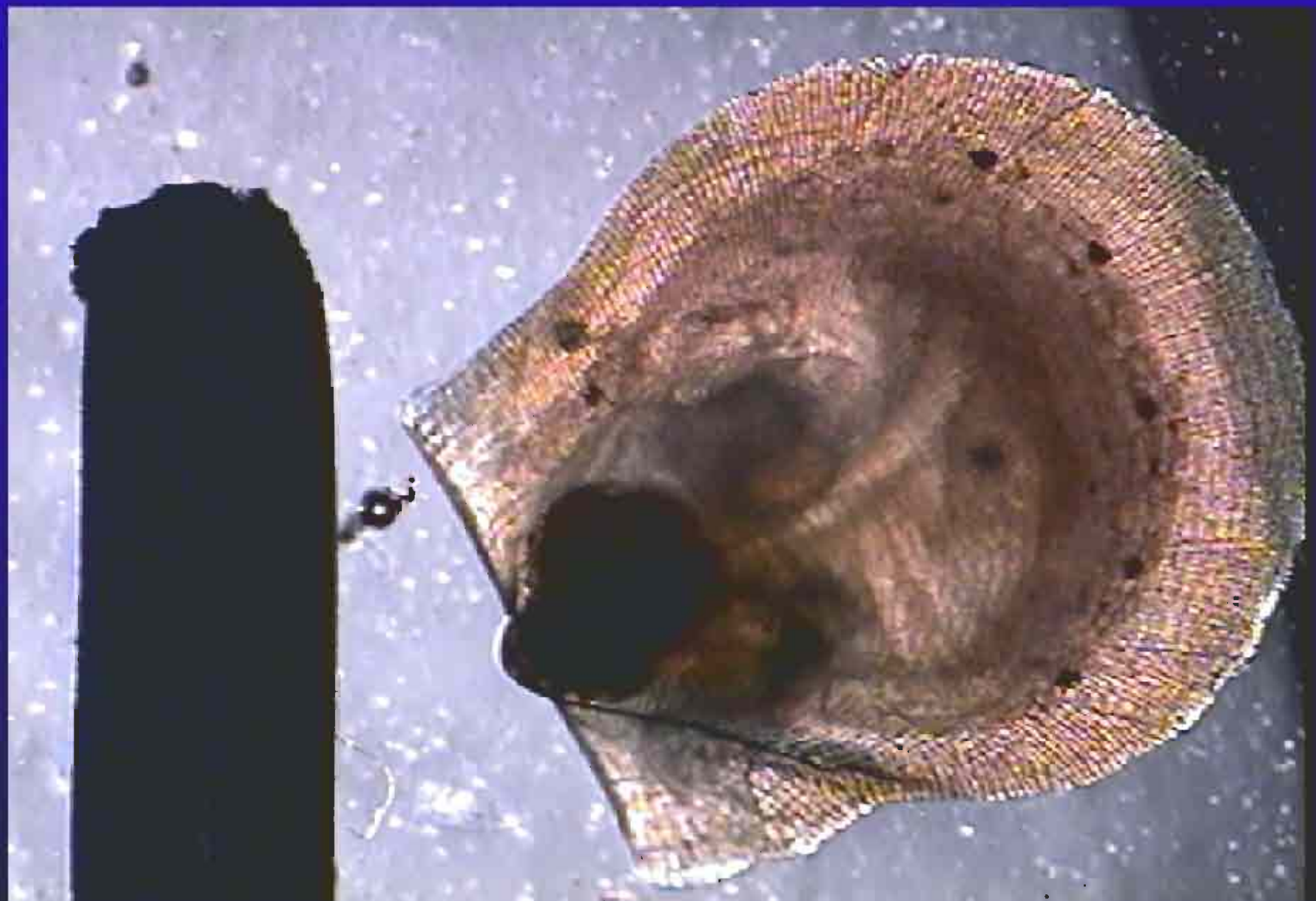






Over-wintering













Releasing the scallops









Supporting the effort: Tagging



Site evaluation/ pre- and post-seeding surveys





Integrating with fishery monitoring



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Developing Research

Tagged scallop on bottom
at Cape Jellison seeding site



- 10% of seed to research - 3 sites/year monitored in different areas
 - Saco Bay
 - Christmas Cove
 - Cape Jellison
- Regional efforts
 - GSI studies UMaine Machias
 - Systematic spat bag deployment
 - Brandeis University early genetics work

When the weather is good for enhancement work – it's also good enough to go fishing....

- License surcharge, tax
- Mandatory participation
- Government subsidies
- Aquaculture
- Transient Gear



Issues/ Future Work

- May only succeed in certain local areas
- Large amount of latent effort
- Controversy over permit by rule and inclusion of transient gear scallop culture / project participants largely opposed to lease-based aquaculture because of perceived loss of fishing ground
- Economics of scallop culture may be problematic – added problem of PSP toxin in whole scallops

Conclusions

- Bottom-up approach
- Positive exchange of information between scientists and fishermen
- Value to science and management beyond stock restoration
- Technology exists and can be adapted to Maine's waters
- Some form of ownership incentive may be important in the long run

Thanks to:

Dana Morse, Chris Bartlett
Maine Sea Grant

Northeast Consortium

Coastal Aquaculture Supply

Stonington Fisheries Alliance
NAMA

Marsden Brewer, John Sieders
Carla Morin, Erin Fisher

Brian Beal, BIRSH

Will Hopkins
Richard Taylor, Kristan Porter

DMR Dive Team

& many others...



STATE OF MAINE SEA SCALLOPS

2000 Data Preliminary

